REMARKS

Support for the amendments to the claims

Citations in the following refer to the present application's US Patent Application Publication 2008/0317075 A1, published Dec 25, 2008. Italics added for clarity.

Support for the amendments to claim 1 is found in the Specification as originally filed at least in the following places: at paragraph 0018 "The general technique may be employed to *calibrate a frequency-modulated laser source in a CPT frequency standard* to run at a desired modulation index."; at paragraph 0028: "... a technique for *determining the modulation index* of laser 103 from photodetector output signal 115 ... characteristics of photodetector output signal 115 may be used either to *set the laser's modulation index* by hand or to set it automatically, and will finally show how the results of a theoretical determination of the characteristics of photodetector output signal 115 may be used to *automatically set the laser's modulation index*."; at paragraph 0034, first sentence; at paragraph 0037, second and third sentences; and in claim 21 of the application as originally filed.

The amendments to claims 2 and 11 correct obvious errors.

The restriction requirement

Examiner's restriction requirement divides the claims into the following groups:

Group I: claims 1-15, drawn to device that employs metal vapor, classified in class 315, subclass Dig 7.

Group II: claims 16-23, drawn to method of using metal vapor, classified in class 257, subclass 48.

Applicants' provisional election of Examiner's Group I

Applicant is provisionally electing group I, claims 1-15. Examiner's description of the groups of claims is in error: Claims 1-15 are drawn to a method, and claims 16-23 are drawn to an apparatus.

How the amendment to claim 1 overcomes Examiner's reasons for the restriction requirement

Examiner stated in the restriction requirement that the invention of claims 1-15 and the invention of claims 16-23 are independent or distinct, **and** that there would be a serious search and examination burden if restriction were not required.

Regarding Examiner's finding that the inventions of claim groups I and II are distinct:

Independent method claim 1 has been amended to add a limitation regarding calibrating a frequency-modulated laser source in a CPT frequency standard to run at a desired modulation index. Similar limitations are already present in independent claims 11 and 21. Thus it is now neither the case that (1) the process for using the product as claimed can be practiced with another materially different product nor (2) the product as claimed can be used in a materially different process of using the product.

Applicant submits that the present amendment to claim 1 thereby overcomes Examiner's finding that the inventions of Examiner's claim groupings are distinct.

Regarding the search and examination burden if restriction were not required:

The present application is the U.S. national stage application of PCT/US04/19695. In the IPER of PCT/US04/19695, regarding all claims, Examiner cited prior art from Class 372, subclass 32, (Coherent Light Generators / Stabilized parameter: frequency). Applicant is amending claim 1 to place claim 1 within the same class and subclass as the remaining claims. The inventions as presently claimed thus now do not require more than a single search. Consequently, the amended claims do not place a

serious search and examination burden on Examiner and the amendment to claim 1 thereby overcomes the need for a restriction requirement.

Accordingly, Applicant respectfully requests that Examiner withdraw the restriction requirement and continue the examination on the basis of claims 1-23 as amended.

A petition for a 1-month extension of time under 37 CFR 1.136(a)(1) and the fee therefore accompany this response. Please charge any other fees required or refund any overpayments to deposit account number 501315.

Respectfully submitted,

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